

**REMARKS**

Claims 1 - 15 remain pending in the present application. The objections and rejections set forth in the Office Action are respectfully traversed below.

**Drawings**

The drawings were objected to for failing to depict a first conductivity type third impurity region. This is incorrect. The first conductivity type third impurity region (recited, for example, in claim 4) refers to the p-type drain region 4b, which is depicted in Fig. 1. Accordingly, no corrections to the drawings are necessary.

**Rejections Under 35 U.S.C. §112, Second Paragraph**

Claim 2 was amended herein to clarify its language.

Claims 3, 4, 14 and 15 were rejected under 35 U.S.C. §112, second paragraph for alleged ambiguity regarding the respective locations of the first and second impurity regions, and the first layer. It is submitted that no ambiguity exists. By way of example only and not a limitation on the complete interpretation of claimed elements, a brief explanation is provided below of the correspondence between claimed elements and how they may read on various elements described in this specification.

For instance, claim 3 details the structures for a “diode structure.” The claimed “second conductivity type first impurity region” reads on, for example, the n-type drain region 4a. The “first conductivity type second impurity region” reads on, for example, the p-type combined regions of 4b and 4c. Note that claim 4 further defines this “second impurity region” as including the “first conductivity type third impurity region” which reads on, for example, the p-type drain region 4b, and

a “fourth impurity region” which reads on, for example, the p-type drain region 4c. The “first layer” reads on, for example, the p-type substrate 2.

As recited in claim 3, the first impurity region (*e.g.* 4a) is formed on the first layer (*e.g.* 2), the second impurity region (*e.g.* 4b + 4c) is formed inside the first impurity region, and the first impurity region (*e.g.* 4a) is formed “between” the first layer (*e.g.* 2) and the second impurity region (*e.g.* 4b plus 4c). This is depicted, for example in Fig. 1. Accordingly, no ambiguity exists in the claimed features, and the rejections should be withdrawn.

Claims 5-11 were rejected under 35 U.S.C. §112, second paragraph regarding the alleged ambiguity concerning “capacitively couple”. It is submitted that no ambiguity exists. Regarding the second impurity region being “capacitively coupled” with the floating gate, the specification describes the n-type drain region 4a and a p-type drain region 4b being “capacitively coupled” with a floating gate electrode 11 through the third insulator film 12 (*see, e.g.* page 18, lines 4-7). With regard to writing data, page 24 describes the “electrostatic coupling” between the drain region 4 and the floating gate electrode 11, as well as the subsequent effect this has on the tunneling energy as described on pages 24 to 26.

Claim 5 was also rejected for having insufficient antecedent basis for “second impurity region.” Claim 5 was amended herein to depend from claim 3.

### **Rejections under 35 U.S.C. §102**

Claims 1, 12 and 13 were rejected under 35 U.S.C. §102 over **Wang et al** (USP 5,572,054). The Office Action alleged that **Wang** disclosed the claimed first source drain region having a diode structure, by referring to reference number 16 in **Wang**. However, the drain 16 disclosed in **Wang** does not have a “diode structure”. In particular, the drain 16 according to **Wang**, only has an n-type

region. There is no n-type/p-type combination to teach or suggest the claimed diode structure for a source/drain region as claimed. For at least this reason, the present claimed invention patentably distinguishes over the prior art.

### **Summary**

In view of the aforementioned amendments and accompanying remarks, the claims are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

Attached hereto is a marked-up version of the changes made to the by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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Enclosures: Version with markings to show changes made